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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,922	10/19/2001	Junmyoung Song	2777-0193P	6320

2292 7590 05/17/2004

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EXAMINER
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PATTERSON, MARC A

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/981,922	<b>Applicant(s)</b> SONG ET AL.	
	<b>Examiner</b> Marc A Patterson	<b>Art Unit</b> 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Specification*

1. The amendment filed March 22, 2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Amended Claim 1 is directed to a tube comprising 'at least 30% by weight polyester or more of a polyester resin.' The original specification, on page 9, discloses polyester in the amount of 95.4% by weight, but the range 'at least 30% by weight polyester or more' is not discussed.

Applicant is required to cancel the new matter in the reply to this Office Action.

## NEW REJECTIONS

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1 – 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Amended Claim 1 is directed to a tube comprising 'at least 30% by weight polyester or more of a polyester resin,' which is not discussed in the original specification.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shikama et al (U.S. Patent No. 5,718,953).

With regard to Claims 1 – 2, Shikama et al disclose a heat – shrinkable tube (column 1, lines 45 – 49) for covering a condenser (column 5, lines 58 – 60), comprising a 30% by weight polyester resin (column 3, lines 44 – 46) and 2% by weight (column 4, line 16) of a particle (silica; column 3, line 62) having a diameter of 0.5  $\mu\text{m}$  (column 4, line 2) which provides slipperiness to the tube (column 3, lines 58 – 60). Shikama et al fail to disclose a slipperiness of 300 to 800 grams – force. However, Shikama et al teach that the slipperiness is provided by the particles (column 3, lines 58 – 60). Therefore one of ordinary skill in the art would have recognized the utility of varying the amount of particles to obtain a desired slipperiness. Therefore, slipperiness would be readily determined through routine optimization of the amount of particles by one having ordinary skill in the art depending on the desired end use of the product.

It therefore would be obvious for one of ordinary skill in the art to vary amount of particles in order to obtain a desired slipperiness, since the slipperiness would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Shikama et al..

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6. Claims 3 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shikama et al. (U.S. Patent No. 5,718,953) in view of Kuze et al (U.S. Patent No. 4,454,312).

Shikama et al disclose a polyester composition as discussed above. With regard to Claim 5, the composition is made by melting (column 8, lines 50 – 51) with a particle (column 8, lines 59 – 60). With regard to Claims 3 – 5, Shikama et al fail to disclose a composition comprising 80 to 99% weight percent of a copolymer resin comprising 1 to 15 mol % of polyethylene naphthalate and 85 to 99 mol % polyethylene terephthalate and having an intrinsic viscosity of 0.65 to 1.0 dl/g, 1 to 20% of a resin comprising polybutylene terephthalate, a pigment, and 0.01 to 1.1% by weight of a metal salt of benzoic acid.

Kuze et al teach a polyester composition comprising 100% by weight of a copolymer of polyethylene terephthalate, polyethylene naphthalate and polybutylene terephthalate (copolymer comprising repeat units of alkylene terephthalates; column 2, lines 31 – 35) having an intrinsic viscosity of 0.638 dl/g (column 8, lines 44 – 49), a pigment (titanium dioxide; column 1, lines 24 – 27) and a metal salt of benzoic acid (potassium benzoate; column 3, line 57) for the purpose of obtaining a composition having excellent slip properties (column 1, lines 5 – 8). Therefore, one of ordinary skill in the art would have recognized the advantage of providing for the copolymer of polyethylene terephthalate, polyethylene naphthalate and polybutylene terephthalate and a pigment and metal salt of benzoic acid of Kuze et al in Shikama et al, which is a polyester composition, depending on the desired slip properties of the end product.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for 100% by weight of a copolymer of

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polyethylene terephthalate, polyethylene naphthalate and polybutylene terephthalate having an intrinsic viscosity of 0.638 dl/g, a pigment and a metal salt of benzoic acid in Shikama et al in order to obtaining a composition having excellent slip properties as taught by Kuze et al.

Kuze et al fail to teach a composition comprising 1 to 15 mol % polyethylene naphthalate, and 85 mol % polyethylene terephthalate, and 1% polybutylene terephthalate, and an intrinsic viscosity of 0.65 to 1.0 dl/g, and 0.01 to 1.1% by weight of a metal salt of benzoic acid. However, Kuze et al teach a copolymer comprising polyethylene naphthalate, polyethylene terephthalate, and polybutylene terephthalate (column 2, lines 31 – 35), an intrinsic viscosity of 0.638 dl/g (column 8, lines 34 – 49) and at least benzoic acid (the composition comprises benzoic acid; column 3, line 57) and teach that the polyester and resin is selected to obtain an excellent slipping property (column 2, lines 23 – 27). Therefore, one of ordinary skill in the art would have recognized the utility of varying the amounts of components in the copolymer, the intrinsic viscosity and the amount of metal salt to obtain a slipping property. Therefore, the slipping property would be readily determined through routine optimization of the amounts of components in the copolymer, the intrinsic viscosity and the amount of metal salt by one having ordinary skill in the art depending on the desired end use of the product.

It therefore would be obvious for one of ordinary skill in the art to vary the the amounts of components in the copolymer, the intrinsic viscosity and the amount of metal salt in order to obtain a slipping property, since the slipping property would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end result as shown by Kuze et al.

### ANSWERS TO APPLICANT'S ARGUMENTS

7. Applicant's arguments regarding the 35 U.S.C. 103(a) rejection of Claims 1 – 2 as being unpatentable over Shikama et al (U.S. Patent No. 5,718,953) and 35 U.S.C. 103(a) rejection of Claims 3 – 5 as being unpatentable over Shikama et al. (U.S. Patent No. 5,718,953) in view of Kuze et al (U.S. Patent No. 4,454,312), of record in the previous Action, have been considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 9 of Paper No. 10, that amended Claim 1 is distinguished from Shikama et al because it is directed to a tube comprising 'at least 30% by weight polyester or more of a polyester resin.'

However, the claimed range is not discussed in the original specification. The original specification, on page 9, discloses polyester in the amount of 95.4% by weight, but the range 'at least 30% by weight polyester or more' is not discussed. The amendment therefore constitutes new matter; the new matter has been considered, however, in the new rejection above.

### *Conclusion*

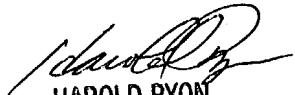
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (571) 272 – 1497. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold

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Pyon, can be reached at (571) 272 – 1498. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

*Marc Patterson*  
Art Unit 1772

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

5/14/04